NATIONAL WEATHER SERVICE

SEVERE WEATHER PREPAREDNESS WEEK

SPRING, 2004

Severe Weather Preparedness Week in Indiana is March 14-20, 2004

Governor Joe Kernan has proclaimed March 14 –20, 2004 as Severe Weather Preparedness Week in Indiana. The National Weather Service, in conjunction with Indiana State Emergency Management, Indiana State Police, the Indiana Department of Education, the broadcast media across Indiana, the American Red Cross, and amateur radio operators will conduct a statewide test of communications systems on **Wednesday, March 17**.

The goals of Severe Weather Preparedness Week are to educate about the hazards of severe thunderstorms and tornadoes, to help everyone be prepared when severe weather strikes, and to have an understanding of severe weather terms and tornado safety rules.

Daily statements will be issued on newswires and NOAA Weather Radio during the week. Your local National Weather Service office will be available for interviews or questions. **Drill details can be found on page 2 of this publication.**

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TURN AROUND DON'T DROWN

Each year, more deaths occur due to flooding than from any other thunderstorm related hazard. Why? The main reason is people underestimate the force and power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around the barriers that warn you the road is flooded.

Whether you are driving or walking, if you come to a flooded road, **Turn Around Don't Drown**. You will not know the depth of the water nor will you know the condition of the road under the water.

To learn more about the dangers of floods and flash floods and how to protect yourself and your loved ones, visit the **Turn Around Don't Drown** web page at: http://www.nws.noaa.gov/om/water/turnaround.shtml.

A full color version of this publication is available on-line at:
http://www.crh.noaa.gov/ind
and
http://www.crh.noaa.gov/iwx/publications

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How the Drill Will Work

Two Drills will be conducted on **Wednesday, March 17**, with each drill consisting of a **Test Watch** issued by the Storm Prediction Center and disseminated by local National Weather Service offices serving Indiana, and then **Test Warnings** issued by National Weather Service offices serving Indiana.

The first test watch will be issued around **200 P.M. EST**, with test warnings then issued by **230 P.M. EST**. The second drill will duplicate the first drill, with a test watch issued around **700 P.M. EST** and then warnings following by **730 P.M. EST**.

The test watch and test warnings will be distributed through the National Warning System (NAWAS), the NOAA Weather Wire Service, news wire services, and broadcast live on NOAA Weather Radio (NWR) using the Tone Alert and Emergency Alert System (EAS). Cable television, broadcast television stations, and radio stations should either simulcast the test messages from NWR or EAS, or have the test messages read by radio and television broadcasters.

Please note, for EAS, NWS offices will use the **RWT (Required Weekly Test)** or **RMT (Required Monthly Test)** codes to transmit the test watches and warnings, not the TOR code. To ensure receipt, make sure your EAS equipment can accept both the **RMT** and **RWT** codes from the NWS.

TORNADO DRILL

If weather postpones the tests, the make-up drill day is Thursday, March 18th.

If you have any problems with the drill (e.g. you did not hear the tone alert or the broadcast), contact your local National Weather Service office.

Severe Weather Preparedness 101 For Schools

Designing a Severe Weather Emergency Plan

All schools need to have a Severe Weather Emergency Plan in place. When designing or reviewing your plan, consider the following.

Gathering Information
Alerting Students and Staff
Determining Severe Weather Safety Zones in Your School
When to Activate Plan
When to Delay Departure of Students
School Bus Driver Actions
Safety Instruction

For more information on the above points, visit: **http://www.crh.noaa.gov/iwx/publications** and click on the link to **A Guide for Designing a Severe Weather Emergency Plan for School**.

Severe Weather Terms and Definitions

Warning — A product issued by the NWS indicating that a particular weather hazard is either imminent or is occurring. A warning indicates the need to take immediate action to protect life and property. Typical warnings include *tornado warning, severe thunderstorm warning,* and *flash flood warning*.

Watch — A product issued by the NWS indicating that conditions are favorable for a particular weather hazard. A watch is usually issued for a time period of several hours and indicates a need for planning, preparation, and an increased awareness of changing weather conditions. Typical watches include: *tornado watch, severe thunderstorm watch*, and *flash flood watch*.

Tornado — A violently rotating column of air in contact with the ground, descending from the base of a severe thunderstorm.

Severe Thunderstorm — A thunderstorm that produces a tornado, damaging winds of 58 mph or higher, and/or hail at least three-quarters of an inch in diameter.

Flash flood — A flood which happens within a few hours after a heavy rainfall or from the failure of a dam, levee, or ice jam.

Flood — A flood occurs when water overflows the confines of a stream or body of water, or accumulates in poorly drained low-lying or urban areas.

Funnel cloud — A violently rotating column of air that does not reach the ground. If the funnel cloud reaches the ground, it becomes a tornado.

Straight line winds — Thunderstorm wind that produces damage with little indication of any rotation, as opposed to tornado-produced damage that does exhibit a rotational damage pattern.

Downburst — A strong downdraft that exits the base of a thunderstorm and hits the earth's surface, resulting in strong gusty winds that may cause property damage.

Squall line — Any narrow band of thunderstorms...sometimes as much as several hundred miles long.

Gust front — The leading edge of a mass of cool, gusty air that flows ahead of a thunderstorm.

Waterspout — A rotating column of air descending from the base of a cumulus cloud over a large body of water, that reaches the water surface.

Cold air funnels — Weak funnel clouds that typically remain aloft. They form in cold unstable air masses and are not generally associated with severe thunderstorms.

NOAA Weather Radio...Voice of the National Weather Service

Keep ahead of severe weather by listening to NOAA Weather Radio for the latest outlooks, watches and warnings. In addition to routine broadcasts, the Specific Area Message Encoding (SAME) feature of NOAA Weather Radio activates the Emergency Alert System (EAS). EAS is used to provide notification of emergencies to the public.

For more information, visit the NOAA Weather Radio Web Site at http://www.nws.noaa.gov/nwr.

For special needs NOAA Weather Radio information, visit http://www.nssl.noaa.gov/~wood/NWR/spc-nds-nwr.

Did You Know?

Special needs NOAA Weather Radios designed to meet the needs of the deaf and hard-of-hearing are available.

Tornado Facts

- ∇ Tornadoes can occur at any time of the year
- ∇ Tornadoes are most likely to occur between 3 and 9 P.M., but have been known to occur at all hours of the day and night
- ∇ The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction
- ∇ The average forward speed is 30 mph, but may vary from nearly stationary to 70 mph
- ∇ Indiana averages 20 tornadoes and 4 tornado fatalities each year

Tornado Distribution and Characteristics

Weak Tornadoes (F0,F1)

- ∇ 88% of all tornadoes
- ∇ Less than 5% of deaths
- ∇ Lifetime of 1-10+ minutes
- ∇ Winds less than 110 mph

Strong Tornadoes (F2,F3)

- ∇ 11% of all tornadoes
- ∇ Nearly 30% of deaths
- ∇ May last 20 minutes or longer
- ∇ Winds of 110-205 mph

Violent Tornadoes (F4,F5)

- ∇ Less than 1% of all tornadoes
- ∇ Approximately 70% of all tornado deaths
- ∇ Lifetime may exceed 1 hour
- ∇ Winds greater than 205 mph

Tornado Safety Rules

At Home

- ∇ Move to the interior of the lowest floor possible
- ∇ Stay away from windows
- ∇ Interior bathrooms offer excellent shelter
- ∇ Leave mobile homes immediately, and proceed to the nearest designated shelter

At School

- ∇ Move students quickly into interior hallways on the lowest floor
- ∇ Stay out of rooms with large free-span ceilings such as gymnasiums and cafeterias
- ∇ Keep children at school beyond regular hours if severe weather is expected

In a Vehicle

- ∇ Never try to outrun a tornado as they can change speed and direction without warning
- ∇ Leave the vehicle and find nearby safe shelter
- ∇ If no shelter is available, crouch in a ditch or ravine, covering your head. Be wary of flash flooding

At Work

- ∇ Post a lookout
- ∇ Move quickly to the section of the plant offering the greatest protection in accordance with severe weather emergency plans

At Large Public Gatherings

(Ball parks, stadiums, race tracks)

- ∇ Follow the guidance announced by officials at the facility

Did You Know?

Tornadoes cause an average of 66 fatalities nationwide each year.

Flood/Flash Flood Facts

- #1 cause of deaths associated with thunderstorms...average of 110 fatalities nationwide each year
- Nearly half of all flash flood fatalities are vehicle-related
- Six inches of fast-moving water can knock you off your feet

Did You Know?

A water depth of two feet will cause most vehicles to float.

Flood/Flash Flood Safety

- Monitor NOAA Weather Radio, or your favorite news source for vital weather information
- If flooding occurs, get to higher ground, away from areas subject to flooding.
- Avoid areas already flooded and do not attempt to cross flowing streams
- Do not drive around barriers that warn you the road is flooded.
- Never drive through flooded roadways as road beds may be washed out under flood waters
- If your vehicle is suddenly caught in rising water, leave it immediately and seek higher ground
- Do not camp or park your vehicle along streams and washes, if there is a threat of flooding.
- Be especially cautious at night when it is harder to recognize flood dangers

Lightning Facts

- Responsible for an average of 73 fatalities nationwide each year
- Causes several hundred million dollars in damage to property annually
- Most lightning fatalities and injuries occur when people are caught outdoors in the summer months during the afternoon and evening

Did You Know?

Counting the number of seconds between a flash of lightning and the next clap of thunder, then dividing this number by 5, will determine the distance to the lightning in miles.

30/30 Lightning Rule: *If after seeing lightning, you cannot count to 30 before hearing thunder, take shelter... stay indoors for 30 minutes after hearing the last clap of thunder.*

Lightning Safety

- Check the forecast before leaving for extended periods outdoors
- Watch for signs of approaching storms
- Postpone outdoor activities if thunderstorms are imminent
- If you can hear thunder, seek shelter in a building or car immediately
- Get out of boats and away from water
- Avoid using the telephone or other electrical appliances
- If caught outside, find a low spot away from trees, fences, and poles
- If you feel your skin tingle or your hair stands on end, squat low to the ground on the balls of your feet

LIGHTNING SAFETY AWARENESS WEEK: JUNE 20-26, 2004

Summer is the peak season for one of the nation's deadliest weather phenomena - lightning. Safeguarding U.S. residents from dangerous lightning is the goal of NOAA's public awareness campaign, "Lightning Kills, Play It Safe." The campaign is designed to lower lightning death and injury rates and America's vulnerability to one of nature's deadliest hazards.

In the United States, an average of 73 people are killed each year by lightning. That's more than the annual number of people killed by tornadoes or hurricanes. Many more are struck, but survive. However, they often report a variety of long-term, debilitating symptoms, including memory loss, attention deficits, sleep disorders, numbness, dizziness, stiffness in joints, irritability, fatigue, weakness, muscle spasms, depression, and an inability to sit for long periods of time. Lightning also causes about $5 billion dollars of economic loss each year in the U.S.

The vast majority of lightning casualties can be easily, quickly, and cheaply avoided, simply by taking appropriate safety precautions.

The purpose of Lightning Safety Awareness Week is to increase awareness of lightning hazards and educate about lightning safety. To learn how to protect yourself, your loved ones, and your belongings, visit the Lightning Safety web page at: http://www.lightningsafety.noaa.gov.

Is your community StormReady?

On November 10th, 2002, an F4 tornado ripped a 53 mile long path of destruction in Ohio from southwestern Van Wert County into Henry County. In Van Wert County, the tornado claimed 2 lives and injured 17. Only the tornado warnings issued by the weather service and the prompt action by those receiving the warnings, prevented a greater loss of life. The benefits of being StormReady were illustrated at the Van Wert Cinemas, where a tornado warning was broadcast live over a local warning alert system. Theater management responded by moving over 50 adults and children to a more secure portion of the theater, just minutes before the tornado struck.

A key requirement for becoming StormReady is having multiple ways to receive severe weather warnings and forecasts and having several ways to alert the public. The warning alert system at the Van Wert Cinemas was one of 70 systems purchased by the Van Wert County Emergency Management as part of meeting the requirements to become StormReady. Van Wert County was designated StormReady on January 10, 2002. Becoming StormReady helps community leaders and emergency managers strengthen their hazardous weather operations. StormReady communities are better prepared to save lives from the onslaught of severe weather through planning, education, and awareness. **Is your community StormReady?** For more information, visit the StormReady Web site at: http://www.nws.noaa.gov/stormready.

Heat Awareness...Be Aware and Be Prepared!

For information on heat awareness, visit: http://www.nws.noaa.gov/om/heat/index.shtml.

Internet Sites and Contacts

National Oceanic and Atmospheric Administration (NOAA)
http://www.noaa.gov

National Weather Service
http://www.nws.noaa.gov

National Weather Service Northern Indiana
http://www.crh.noaa.gov/iwx

National Weather Service Indianapolis
http://www.crh.noaa.gov/ind

National Weather Service Office of Meteorology
Severe Weather Awareness Page
http://www.nws.noaa.gov/om/severeweather

National Weather Service Office of Hydrology
http://www.nws.noaa.gov/oh

Storm Prediction Center
http://www.spc.noaa.gov

National Hurricane Center
http://www.nhc.noaa.gov

NOAA Weather Radio
http://www.nws.noaa.gov/nwr

Skywarn
http://www.skywarn.org

Indiana State Emergency Management Agency
Public Information Officer—Alden Taylor
317-232-3992

Indiana State Police
Mike Robbins
317-233-6055
E-mail - mrobbins@isp.state.in.us

Indiana Department of Education
Director of School Traffic Safety - Pete Baxter
317-232-0890
E-mail - pbaxter@doe.state.in.us

Federal Emergency Management Agency
http://www.fema.gov/fima

American Red Cross
http://www.redcross.org/services/disaster/keepsafe

Interactive Weather Information Network
http://iwin.nws.noaa.gov/emwin/index.htm

Indiana State Emergency Management Agency
http://www.in.gov/sema

Indiana State Police
http://www.in.gov/isp

Indiana Department of Education
http://ideanet.doe.state.in.us/safety

Climate Prediction Center
http://www.cpc.ncep.noaa.gov

National Climatic Data Center
http://lwf.ncdc.noaa.gov/oa/ncdc.html

Midwest Climate Center
http://mcc.sws.uiuc.edu

American Red Cross of Greater Indianapolis
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Amateur Radio Emergency Services SKYWARN
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Emergency Alert System
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E-mail - gmolnar@wndu.com

National Weather Service

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317-856-0360

Severe Weather Preparedness Week Material
OPEN IMMEDIATELY!

Wanted:
Severe Weather Spotters

For a SKYWARN training session near you, contact local your local NWS Office or look for a link to training dates on the Internet Homepage of your local office.